

ABSTRACT OF THE DISCLOSURE

An oscillating circuit having a noise reduction circuit is disclosed. The noise reduction circuit is coupled to the current source for the oscillating circuit. The noise reduction circuit reduces a bias noise component from a bias current, and a supply noise component from a supply current. The noise reduction circuit is coupled to the current source at a gate and a supply for the current source. The noise reduction circuit includes a filter coupled to the gate of the current source that reduces the bias noise component. The noise reduction circuit also includes a degeneration circuit coupled to the supply of the current source that reduces the supply noise component. The current source generates an input signal to control the oscillating circuit with reduced noise.